spermia, failure to ovulate or hostile cervical mucus. An infertility workup should always be carried out, and maximum information obtained concerning the tubes by seeing the old operative records, using hysterosalpingography and viewing the tubes through a laparoscope. For couples where the only problem consists of tubal occlusion, microsurgery has improved the prognosis and enabled many previously infertile couples to achieve a pregnancy.

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Real-Time Ultrasound in Obstetrics

THE ABILITY to visualize and measure intrauterine structures has resulted in new information in the clinical practice of obstetrics. Real-time (RT) imaging is the term applied to ultrasound scanners that display moving structures. This is accomplished by high-speed presentation of a series of images at frame rates in excess of 30 per second, the usual level for flicker-free viewing. Image resolution has been greatly improved, although it is generally inferior to static B-scans.

The enthusiasm among physicians in RT echography is enhanced by the small size and ease of operation of this equipment, and the low cost and the short time involved in scanning the gravid uterus. Most units are portable and can be used at the bedside or in the office. Fetal movements and cardiac pulsation can be visualized from as early as eight weeks gestation, thus allowing differential diagnosis between threatened abortion and fetal demise. For amniocentesis, pockets of amniotic fluid can be identified and the depth for puncture be determined in order to avoid injury to the fetus, umbilical cord or placenta. In patients with third trimester bleeding the placenta can be localized.

The most useful measurement in evaluating fetal age and growth is the biparietal diameter of the skull. The accuracy of these measurements is approximately 2 mm with the use of RT as compared to caliper measurements of neonates delivered by repeat cesarean section. Sonar dating is indicated in patients with uncertain dates or size-date discrepancies, and in high-risk pregnancies where preterm delivery is likely if trouble arises later. The optimal time for dating is from 22 to 26 weeks because body size of all fetuses is rather similar during this period of pregnancy.

Optional equipment improving the efficiency of RT scanners is a camera to take pictures of representative tomograms, electronic calipers, a freeze-frame for measurements, and a key board for patient identification and labeling of structures on the scan.

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